

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for electronic imaging, comprising:

forming an image comprising a background color and a non-background color on a plurality of pixels in a color mosaic image sensor, in which each pixel has a filter of a respective color associated therewith;

receiving from each of the plurality of pixels a respective initial signal responsive to the image;

determining the background color of the image responsive to the initial signals;

determining the non-background color of the image responsive to the initial signals; and

calculating an adjusted signal for each pixel of the plurality of pixels responsive to the initial signal of the pixel and to at least one of the background color and the non-background color and to the respective color of the filter associated with the pixel.

2. (Original) A method according to claim 1, wherein the color mosaic sensor comprises pixels of at least two specific colors, and wherein determining the background color comprises locating a background region of the image responsive to the initial signals of the pixels of at least one of the specific colors, and wherein determining the non-background color comprises locating a non-background region of the image responsive to the initial signals of the pixels of the at least one of the specific colors.

3. (Original) A method according to claim 2, wherein determining the background color comprises determining one or more background values responsive to the initial signals of the pixels of the at least two specific colors in the background region, and wherein determining the non-background color comprises determining one or more non-background values responsive to the initial signals of the pixels of the at least two specific colors in the non-background region.

4. (Original) A method according to claim 3, wherein calculating the adjusted signal for each pixel comprises determining the adjusted signal responsive to the one or more background values and the one or more non-background values.

5. (Original) A method according to claim 1, wherein forming the image comprises forming a calibration image on the color mosaic image sensor, and wherein calculating the adjusted signal for each pixel comprises determining one or more correction factors for the sensor responsive to the calibration image and calculating a corrected value for each pixel responsive to the one or more correction factors.

6. (Original) A method according to claim 1, wherein calculating the adjusted signal for each pixel comprises calculating a plurality of sub-pixel resolution signals for each pixel responsive to a level of the initial signal of the pixel.

7. (Original) A method according to claim 6, wherein calculating the plurality of sub-pixel resolution signals comprises identifying one or more straight line segments within the image.

8. (Original) A method according to claim 1, wherein calculating the adjusted signal for each pixel comprises implementing a process of binarization of the image and utilizing the binarization to perform optical character recognition (OCR) on at least a portion of the image.

9. (Currently Amended) A method for electronic imaging, comprising:

forming an image comprising a first plurality of areas, each area comprising a respective background color and a respective non-background color, on a second plurality of pixels in a color mosaic image sensor, in which each pixel has a filter of a respective color associated therewith;

receiving from each of the second plurality of pixels a respective initial signal responsive to the image;

determining which of the second plurality of pixels correspond to each area responsive to the background color and non-background color of each area;

determining for each area the respective background color of the image responsive to the initial signals;

determining for each area the respective non-background color of the image responsive to the initial signals; and

calculating an adjusted signal for each pixel of the second plurality of pixels responsive to the initial signal of the pixel and to at least one of the ~~first plurality of~~ background colors and the ~~first plurality of~~ non-background colors of the area in which the pixel is located and to the respective color of the filter associated with the pixel.

10. (Currently Amended) Apparatus for electronic imaging, comprising:
a color mosaic image sensor comprising a plurality of pixels, which are
adapted to generate respective initial signals responsive to an image formed thereon
and in which each pixel has a filter of a respective color associated therewith; and
a central processing unit (CPU), coupled to receive the respective initial
signals from the plurality of pixels and, responsive to the initial signals, to determine a
background color and a non-background color of the image and to calculate, for each
of the plurality of pixels, an adjusted signal responsive to the initial signal and to at
least one of the background color and the non-background color and to the respective
color of the filter associated with the pixel.

11. (Original) Apparatus according to claim 10, wherein the plurality
of pixels comprise pixels of at least two specific colors, and wherein the CPU locates
a background region and a non-background region of the image responsive to the
initial signals of the pixels of at least one of the specific colors.

12. (Original) Apparatus according to claim 11, wherein the CPU
determines one or more background values responsive to the initial signals of the
pixels of the at least two specific colors in the background region, and determines one
or more non-background values responsive to the initial signals of the pixels of the at
least two specific colors in the non-background region.

13. (Original) Apparatus according to claim 12, wherein the CPU
determines the adjusted signal responsive to the one or more background values and
the one or more non-background values.

14. (Original) Apparatus according to claim 10, and comprising a calibration grid which forms a calibration image on the color mosaic image sensor, and wherein the CPU determines one or more correction factors for the sensor responsive to the calibration image and calculates a corrected value for each pixel responsive to the one or more correction factors.

15. (Original) Apparatus according to claim 10, wherein the CPU calculates a plurality of sub-pixel resolution signals for each pixel responsive to a level of the initial signal of the pixel.

16. (Original) Apparatus according to claim 15, wherein the CPU determines one or more straight line segments within the image.

17. (Original) Apparatus according to claim 10, wherein the CPU implements a process of binarization of the image and utilizes the binarization to perform optical character recognition (OCR) on at least a portion of the image.

18. (Currently Amended) Apparatus for electronic imaging, comprising:
a color mosaic image sensor comprising a first plurality of pixels, which are adapted to generate respective initial signals responsive to an image and in which each pixel has a filter of a respective color associated therewith, the image comprising a second plurality of areas, each area comprising a respective background color and a respective non-background color, formed thereon; and

a central processing unit (CPU), coupled to receive the respective initial signals from the first plurality of pixels and which is adapted, responsive to the initial

signals, to determine which of the pixels correspond to each area responsive to the background color and non-background color of each area, to determine for each area a background color and a non-background color of the image, and to calculate, for each of the first plurality of pixels, an adjusted signal responsive to the initial signal and to at least one of the ~~second plurality of~~ background colors and the ~~second plurality of~~ non-background colors of the area in which the pixel is located and to the respective color of the filter associated with the pixel.

19. (New) A method according to claim 1, wherein calculating the adjusted signal comprises, for each of at least some of the pixels:

determining a first relation between the respective color of the filter and the background color;

determining a second relation between the respective color of the filter and the non-background color; and

applying at least one of the first and second relations to the initial signal in order to calculate the adjusted signal.

20. (New) A method according to claim 19, wherein applying the at least one of the first and second relations comprises determining a respective correction for each of the at least some of the pixels based on the at least one of the first and second relations, and applying the respective correction to each of the at least some of the pixels individually in order to determine the adjusted signal.

21. (New) Apparatus according to claim 10, wherein the CPU is adapted to calculating the adjusted signal comprises, for each of at least some of the pixels, by determining a first relation between the respective color of the filter and the background color, determining a second relation between the respective color of the filter and the non-background color, and applying at least one of the first and second relations to the initial signal in order to calculate the adjusted signal.

22. (New) Apparatus according to claim 21, wherein the CPU is adapted to calculate the adjusted signal by determining a respective correction for each of the at least some of the pixels based on the at least one of the first and second relations, and applying the respective correction individually to the initial signal received from each of the at least some of the pixels.